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Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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UTILITY
PATENT APPLICATION
TRANSMITTAL

(Only for new non provisional applications under 37 CFR 1.53(b))

Attorney Docket No. NC 84,785

First Inventor Hughes

Title SEMICONDUCTOR SUBSTRATE INCORPORATING A
NEUTRON CONVERSION LAYER

Express Mail Label No.

17497 U.S. PTO
10/693846

102003

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 21]
(preferred arrangement set forth below)
- Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U. S. C. 113) [Total Sheets 5]
5. Oath or Declaration [Total Pages 26]
- a. ☐ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
- i. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s)
named in the prior application, see 37 CFR
1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or
Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement of Power of Attorney
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 [Copies of IDS Citations]
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Request and Certification under 35 U.S.C. 122
(b)(2)(13)(i). Applicant must attach form PTO/SB/35
or its equivalent.
17. ☐ Other: _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Prior application information: Examiner _____ Group Art Unit _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19 CORRESPONDENCE ADDRESS

☒ Customer Number or Bar Code Label

(Insert Customer No. or Bar code label here)

or ☐ Correspondence address below

Name						Naval Research Laboratory, Code 1008.2	
Address						4555 Overlook Ave., S.W., Code 1008.2	
City		Washington		State	DC	Zip Code	20375-5320
Country	US		Telephone	202-404-1552		Fax	202-404-7380

Name (Print/Type)	John J. Karasek	Registration No. (Attorney/Agent)	36,182
Signature			Date 10/20/03

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

The PTO did not receive the following
listed item(s) Data Sheet

02578 U.S. PTO

PTO/SB/17 (01-03)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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FEE TRANSMITTAL for FY 2004

Effective 0110112003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 770)

Complete if Known

Application Number	Not yet assigned
Filing Date	October 20, 2003
First Named Inventor	Hughes
Examiner Name	Not yet assigned
Art Unit	Not yet assigned
Attorney Docket No.	NC 84,785

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

 Deposit Account Number: 50-0281
 Deposit Account Name: Naval Research Laboratory

The Commissioner is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments
☐ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 375	Utility filing fee	770
1002 340	2002 165	Design filing fee	
1003 530	2003 260	Plant filing fee	
1004 770	2004 375	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1)			(\$ 770)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims below	Fee from	Fee Paid
20	-20- =		
3	-3- =		
Multiple Dependent			

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 42	Independent claims in excess of 3
1203 290	2203 140	Multiple dependent claim, if not paid
1204 86	2204 42	Reissue independent claims over original patent
1205 18	2205 9	Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ 0)

*or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 420	2252 205	Extension for reply within second month	
1253 950	2253 465	Extension for reply within third month	
1254 1480	2254 725	Extension for reply within fourth month	
1255 2010	2255 985	Extension for reply within fifth month	
1401 330	2401 160	Notice of Appeal	
1402 330	2402 160	Filing a brief in support of an appeal	
1403 290	2403 140	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,330	2453 650	Petition to revive - unintentional	
1501 1,330	2501 650	Utility issue fee (or reissue)	
1502 480	2502 235	Design issue fee	
1503 640	2503 315	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 770	2809 375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 770	2810 375	For each additional invention to be examined (37 CFR 1.129(b))	
1801 770	2801 375	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

Other fee (specify)

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

SUBMITTED BY

(Complete if applicable)

Name (Print/Type)	JOHN KARASEK	Registration No. (Attorney/Agent)	36,182	Telephone	202-404-1552
Signature	[Signature]	Date	10/20/2003		

WARNING: Information in this form may become public. Credit card information should not be included in this form. Provide credit card information and authorization in PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

October 20, 2003

Navy Case No. 84,785

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: Hughes

For: **SEMICONDUCTOR SUBSTRATE INCORPORATING A NEUTRON CONVERSION
LAYER**

NOTICE TO FILING WITHOUT OATH OR DECLARATION BY APPLICANT

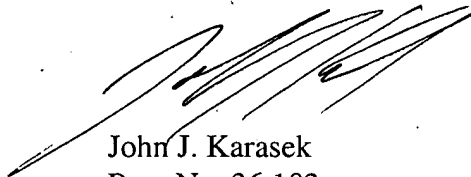
Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Please take notice that this application is being filed pursuant to 37 C.F.R. 153(d) without the oath or declaration of the Applicant. This is being done to secure an early filing date.

Upon the Notice from the Patent Office required by 1.53(d), Applicant will file the required oath or declaration, and pay the surcharge as set forth in 37 C.F.R. 1.16(e).

Respectfully submitted,



John J. Karasek
Reg. No. 36,182